

a substrate;

a first circuit line including a first conductive pad and having a first thickness extending in a direction perpendicular to a surface of the substrate at which the first circuit line is coupled to the substrate, and wherein the first circuit line is totally external to the substrate aside from being in contact with the substrate; and

a second circuit line including a second conductive pad and having a second thickness extending in a direction perpendicular to a surface of the substrate at which the second circuit line is coupled to the substrate, wherein the second circuit line is electrically coupled to the first circuit line, wherein the second thickness is unequal to the first thickness, wherein the second circuit line is totally external to the substrate aside from being in contact with the substrate, and wherein the first circuit line is in direct mechanical contact with the second circuit line.

3. (ONCE AMENDED) An electronic structure, comprising:

a substrate;

a first circuit line including a first conductive pad and having a first thickness extending in a direction perpendicular to a surface of the substrate at which the first circuit line is coupled to the substrate, and wherein the first circuit line is totally external to the substrate aside from being in contact with the substrate;

a second circuit line including a second conductive pad and having a second thickness extending in a direction perpendicular to a surface of the substrate at which the second circuit line is coupled to the substrate, wherein the second circuit line is electrically coupled to the first circuit line, wherein the second thickness is unequal to the first thickness, and wherein the second circuit

line is totally external to the substrate aside from being in contact with the substrate; and

a third circuit line coupled to the substrate, wherein the third circuit line has a third thickness that is unequal to both the first thickness and the second thickness, wherein a portion of the third circuit line is electrically coupled to a portion of the first circuit line, wherein a portion of the third circuit line is electrically coupled to a portion of the second circuit line, wherein the third thickness extends in a direction perpendicular to a surface of the substrate at which the third circuit line is coupled to the substrate, and wherein the third circuit line is totally external to the substrate aside from being in contact with the substrate.

4. (ONCE AMENDED) The electronic structure of claim 2, wherein an end of the first circuit line includes the first conductive pad, and wherein an end of the second circuit line includes the second conductive pad.

5. (ONCE AMENDED) The electronic structure of claim 2, further comprising a protective coating that covers a portion of a circuit line, wherein the circuit line includes the first circuit line and the second circuit line.

6. (ONCE AMENDED) The electronic structure of claim 2, wherein the surface of the substrate to which the first circuit line is coupled is a top surface of the substrate, and wherein the surface of the substrate to which the second circuit line is coupled is a bottom surface of the substrate.

7. The electronic structure of claim 6, wherein said electrical coupling of the second circuit line to

the first circuit line includes a plated through hole (PTH), wherein a portion of the first circuit line is coupled to a first end of the PTH, and wherein a portion of the second circuit line is coupled to a second end of the PTH.

9. (ONCE AMENDED) The electronic structure of claim 2, further comprising:

- a first solder ball coupled to the first conductive pad;
- an electronic assembly coupled to the first solder ball;
- a second solder ball coupled to the second conductive pad; and
- an electronic carrier coupled to the second solder ball.

10. The electronic structure of claim 9, wherein a diameter of the second solder ball is unequal to a diameter of the first solder ball.

11. (ONCE AMENDED) The electronic structure of claim 2, wherein the first conductive pad includes a metallic layer, and further comprising:

- a first metallic coating over the metallic layer; and
- a second metallic coating over the first metallic coating, wherein the first metallic coating inhibits diffusion of a metal from the second metallic coating into the metallic layer.

12. The electronic structure of claim 11, further comprising:

- a wirebond interconnect coupled to the first conductive pad at the second metallic coating;
- an electronic assembly coupled to the wirebond interconnect;

a solder ball coupled to the second conductive pad; and
an electronic carrier coupled to the solder ball.

13. The electronic structure of claim 12, wherein the metallic layer includes copper, wherein the first metallic coating includes nickel, wherein the metal of the second metallic coating is selected from the group consisting of gold and palladium, and wherein the wirebond interconnect includes a gold wire.

27. The electronic structure of claim 6, wherein an end of the first circuit line includes the first conductive pad, and wherein an end of the second circuit line includes the second conductive pad.

28. The electronic structure of claim 6, further comprising:

a first solder ball coupled to the first conductive pad;
an electronic assembly coupled to the first solder ball;
a second solder ball coupled to the second conductive pad; and
an electronic carrier coupled to the second solder ball.

29. (ONCE AMENDED) The electronic structure of claim 28, wherein a diameter of the second solder ball is unequal to a diameter of the first solder ball.

30. The electronic structure of claim 6, wherein the first conductive pad includes a metallic layer, and further comprising:

a first metallic coating over the metallic layer; and

a second metallic coating over the first metallic coating, wherein the first metallic coating inhibits diffusion of a metal from the second metallic coating into the metallic layer.

31. (ONCE AMENDED) The electronic structure of claim 30, further comprising:

a wirebond interconnect coupled to the first conductive pad at the second metallic coating;

an electronic assembly coupled to the wirebond interconnect;

a solder ball coupled to the second conductive pad; and

an electronic carrier coupled to the solder ball.

32. (ONCE AMENDED) The electronic structure of claim 31, wherein the metallic layer includes copper, wherein the first metallic coating includes nickel, wherein the metal of the second metallic coating is selected from the group consisting of gold and palladium, and wherein the wirebond interconnect includes a gold wire.

33. The electronic structure of claim 3, wherein the first conductive pad includes a metallic layer, and further comprising:

a first metallic coating over the metallic layer; and

a second metallic coating over the first metallic coating, wherein the first metallic coating inhibits diffusion of a metal from the second metallic coating into the metallic layer.

34. (ONCE AMENDED) The electronic structure of claim 33, further comprising:

a wirebond interconnect coupled to the first conductive pad at the second metallic coating;
an electronic assembly coupled to the wirebond interconnect;
a solder ball coupled to the second conductive pad; and
an electronic carrier coupled to the solder ball.

35. The electronic structure of claim 3, wherein the third circuit line is in direct mechanical contact with the first circuit line, and wherein the third circuit line is in direct mechanical contact with the second circuit line.

REMARKS

Claims 2-7, 9-13, and 27-35 are currently pending based on the amendment herein.

The Examiner has renumbered claims 14-22 as claims 27-35, respectively. Claims 29, 31, 32, and 34 have been amended solely for the purpose of correcting dependencies of some claims on other claims so as to be consistent with the renumbering of claims by the Examiner. Since claims 29, 31, 32, and 34 have been amended for no purpose other than to be consistent with the renumbering of claims by the Examiner, Applicants respectfully request that the amendment of claims 29, 31, 32, and 34 be entered to place the application in better condition for appeal, as well as for continued prosecution of the present patent application.

The Examiner rejected claims 2-7, 9-13 and 27-35 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which application regards as the invention.

The Examiner rejected claims 2-4, 11, 33 and 35 under 35 U.S.C. §102(b) as being